TRANSITION DETAILS - TANGENT TO CURVE

$\frac{1}{2}$ L
$\frac{1}{2}$ L (B)
L_T x 2 (B)

CL CONSTRUCTION
PC OR PT

SHOULDER
W ← TRAFFIC DIRECTION
SHOULDER

LINE C
LINE B
LINE A

LINE A, BASE LINE
(PROFILE GRADE LINE)

SHOULDER
W TRAFFIC DIRECTION →
SHOULDER

LINE D
LINE E
LINE F

LINE D, BASE LINE
(PROFILE GRADE LINE)

L_T
RUNOUT
L_R
RUNOFF
L
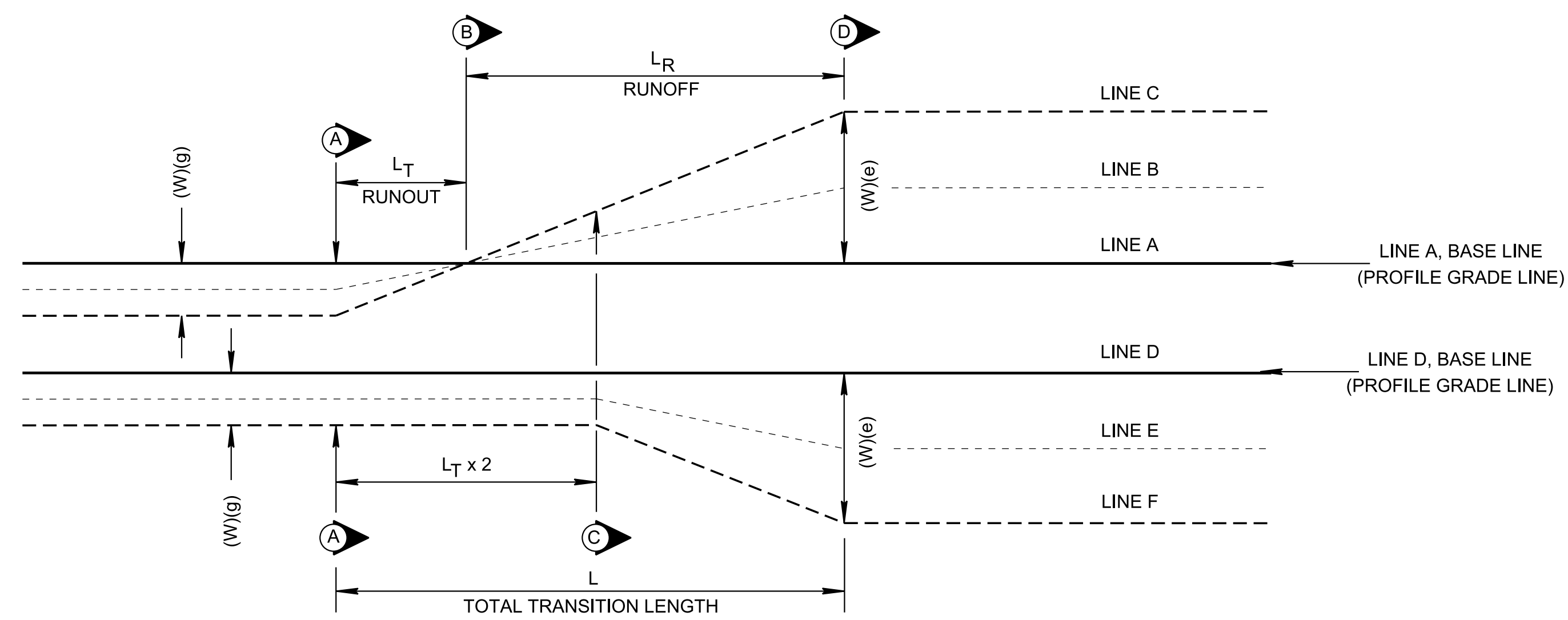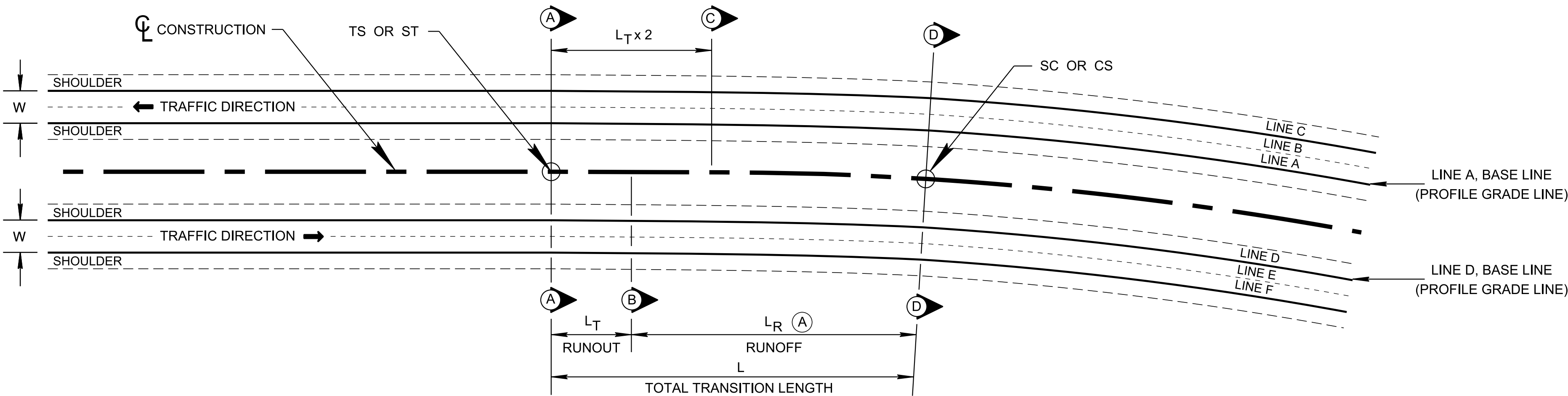TOTAL TRANSITION LENGTH

DIAGRAMMATIC PROFILES OF THE PAVEMENT EDGE LINES
SEE STANDARD DRAWING RD11-SE-3A FOR ADDITIONAL DETAILS

L_R
RUNOFF

(W)(g)
L_T
RUNOUT

LINE C
LINE B
LINE A

LINE A, BASE LINE
(PROFILE GRADE LINE)

(W)(e)

LINE D
LINE D, BASE LINE
(PROFILE GRADE LINE)

(W)(g)
L_T x 2
(W)(e)

LINE E
LINE F

L
TOTAL TRANSITION LENGTH

TRANSITION DETAILS - SPIRAL CURVE

CL CONSTRUCTION
TS OR ST
L_T x 2
SC OR CS

SHOULDER
W ← TRAFFIC DIRECTION
SHOULDER

LINE C
LINE B
LINE A

LINE A, BASE LINE
(PROFILE GRADE LINE)

SHOULDER
W TRAFFIC DIRECTION →
SHOULDER

LINE D
LINE E
LINE F

LINE D, BASE LINE
(PROFILE GRADE LINE)

L_T
RUNOUT
L_R (A)
RUNOFF
L
TOTAL TRANSITION LENGTH

LEGEND

PC = POINT OF CURVATURE
PT = POINT OF TANGENCY
TS = TANGENT TO SPRIAL
ST = SPRIAL TO TANGENT
SC = SPIRAL TO CURVE
CS = CURVE TO SPIRAL
◯ = SECTION VIEW (SEE RD11-SE-3A)
L = TOTAL TRANSITION LENGTH = DISTANCE REQUIRED TO TRANSITION
FROM NORMAL CROWN (2%) TO FULL SUPERELEVATION (e).
INCLUDES SUPERELEVATION RUNOFF (L_R)
AND TANGENT RUNOUT (L_T) LENGTH.
$\frac{1}{2}$ L = 50% OF TOTAL TRANSITION LENGTH (L)
W = LANE WIDTH (1 LANE) (TABLES ASSUME 12FT LANES)
g = NORMAL CROSS SLOPE (0.02 FT/FT)
L_R = DISTANCE TO CHANGE CROSS SLOPE FROM 0% TO e
e = SUPERELEVATION RATE (FT/FT)
L_T = DISTANCE TO CHANGE CROSS SLOPE FROM -2% TO 0%
S = NORMAL SHOULDER SLOPE

DESIGN NOTES

(A) SPIRAL CURVE LENGTH COINCIDES WITH TOTAL TRANSITION LENGTH.

(B) $\frac{1}{2}$ OF TOTAL TRANSITION LENGTH UNLESS SHOWN OTHERWISE ON PLANS.

GENERAL NOTES

(1) REFER TO SPECIFIC CURVE DATA CONTAINED IN PROJECT PLANS FOR
TOTAL TRANSITION LENGTH (L) AND FULL SUPERELEVATION (e).

(2) WHEN SPIRAL CURVES ARE REQUIRED, THE TOTAL TRANSITION LENGTH
(L) WILL BE PLACED WITHIN THE SPIRAL. WHEN SPIRAL CURVE
TRANSITIONS ARE NOT REQUIRED, 50% OF THE TOTAL TRANSITION
LENGTH TO BE PLACED EQUALLY ON EITHER SIDE OF THE PC AND PT
UNLESS OTHERWISE SHOWN ON THE PLANS.

(3) UNLESS OTHERWISE SPECIFIED, ALL LENGTHS ARE MEASURED ALONG
THE CENTERLINE OF CONSTRUCTION.

(4) SUPERELEVATION ON THIS STANDARD ARE SHOWN FOR CURVES TO THE
RIGHT. CURVES TO THE LEFT ARE MIRROR IMAGE OF WHAT IS SHOWN.

(5) AXIS OF ROTATION COINCIDES WITH PROFILE GRADE LOCATION.

(6) THIS DRAWING IS TO BE USED IN CONJUNCTION WITH STANDARD
DRAWING RD11-SE-3A AND RD11-LR SERIES.

(7) USE FORMULAS ON STANDARD DRAWING RD11-SE-1 TO DETERMINE
TOTAL TRANSITION LENGTH (L).

STATE OF TENNESSEE
STANDARD
DRAWING
DEPARTMENT OF TRANSPORTATION

SUPERELEVATION
TRANSITION
DETAILS FOR
DIVIDED
ROADWAYS

01-01-2019 | RD11-SE-3

NOT TO SCALE